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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,003

09/18/2006

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40616-286338

3079

26694

7590

02/07/2011

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EXAMINER

HOBAN, MATTHEW E

ART UNIT

PAPER NUMBER

1734

MAIL DATE

DELIVERY MODE

02/07/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,003	Applicant(s) HIROSE ET AL.	
	Examiner Matthew E. Hoban	Art Unit 1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,9 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 9 is/are allowed.
- 6) ☒ Claim(s) 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/10/10</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/10/2010 has been entered.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 17-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims are to a composition or material having less than 200 W/kg of iron loss. This range includes 0 W/kg, however, this endpoint is not described or shown within any part of the originally filed specification. Furthermore, the claims do not show a material having loss approaching 100 W/kg. Thereafter, the range claimed is unsupported, as it is unclear how one of ordinary skill in

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the art would achieve said range of properties. Furthermore regarding only claims 17 and 18, the ranges associated with the claimed compositions constitute new matter as these values are only shown to be possible to attain by use of a very specific lubricant, zinc stearate. The general lubricant in the claims would incorporate other known lubricants not disclosed by applicant as achieving such properties. It is very clear in the specification that such a property has not been achieved with a general lubricant.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rutz in 6372348 in view of Hanano in 5277831.

Regarding Claim 17 and 18: Rutz teaches an iron powder composition useful for making powder magnetic cores. Rutz teaches a starting iron-based core particle, which is iron based or nickel based. Preferred examples of starting powders are the ANCORSTEEL series (See Column 6, Lines 5-70). These powders are then provided with two different insulating layers. The first of these is considered a preinsulating layer and is typically a phosphate complex of iron (iron phosphate salt) (See Column 7, Line 55-Column 8, Line 24). This phosphate salt can be created by the use of phosphoric acid or with other materials such as alkali metal or earth metal phosphates. The iron powder with this preinsulating layer is then dried.

After this step, an annealable insulating material is coated upon the iron phosphate salt layer. This insulating material is in the form of oxide particles dispersed in a resin in a ratio of from .3:1 to 1:1 (polymer: oxide). This layer is continuous and non porous and decomposes at temperatures of 250 C or greater (See Column 4, Lines 17-70). Typical oxides used in this annealable material are silica, alumina, boria, sodium

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carbonate, etc (See Column 5, Lines 25-30). Comparable to the weight of the iron particles, this layer can be present from .001 to 15 wt%; meaning that the amount of the resin is from .00023 to 7.5 wt% of the composition (See Column 5, Lines 50-55).

Furthermore, when these composite particles are to be used for compression molding or similar compaction techniques, Rutz teaches that it is advantageous to mix a lubricant in an amount up to 1 wt% with the composite particle. One exemplary lubricant composition is boron nitride. Therefore, in terms of the amount of lubricant used in his composition, Rutz teaches an overlapping amount with the instant claims. One of ordinary skill in the art need only select from this portion of the overlapping ranges to arrive at the invention as claimed. Overlapping ranges have been held to present a prima facie case of obviousness over the prior art. See MPEP 2144.04. One would expect the same properties to arise from the overlapping range of compositions. As the core would be made of the same composition (See Instant Examples) it cannot have two sets of divergent properties. Materials having the same composition and structure must necessarily have the same properties. Thereafter, the material of Rutz must have the iron loss instantly claimed.

Rutz is silent as to the particle size of Boron Nitride.

However, Hanano teaches that it is known that when boron nitride is used as a lubricant it should have an average particle size between 1 and 5 microns. Thereafter, it is known that this range of particle sizes is useful and available. In determining suitable

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particle sizes one of ordinary skill would turn to those teachings of the prior art such as those of Hanano. Thereafter, one of ordinary skill in the art would be motivated to use the particle size as described by Hanano when using Boron nitride as a lubricant. This combination would be motivated by the desire to provide expected and suitable results.

Allowable Subject Matter

3. Claims 1 and 9 allowed.

Response to Arguments

Applicant's arguments with respect to claim 17 and 18 have been considered but are moot in view of the new ground(s) of rejection. The unexpected results of applicant have not been shown with any material other than the lubricant zinc stearate. The new rejection is based on the lubricant boron nitride and the new matter which remains in the claim. Reasons for allowance of claims 1 and 9 were included in the previous Advisory Action and are based on the unexpected results of using zinc stearate within the range of values claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Hoban whose telephone number is (571) 270-3585. The examiner can normally be reached on Monday - Friday from 10 AM to 6:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emily M. Le can be reached on 5712720903. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. Melissa Koslow/
Primary Examiner, Art Unit 1734

/Matthew E Hoban/
Examiner, Art Unit 1734